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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,479	12/21/2001	G. Finn Wredenhagen	1020457-0021	4556

20575 7590 07/29/2005

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EXAMINER

YENKE, BRIAN P

ART UNIT

PAPER NUMBER

2614

DATE MAILED: 07/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/024,479

Applicant(s)

WREDENHAGEN ET AL.

Examiner

BRIAN P. YENKE

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 8-21 and 23-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-21 and 23-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's arguments filed 18 Jan 05 have been fully considered but they are not persuasive.

It is noted by the examiner that the applicant stated the *§112* rejection made to claims 7 and 22 is obviated in view of the amendment which now defines j in the equation. However, the amendment sent in on 18 Jan 05 has canceled claims 7 and 22.

Applicant's Arguments

- a) Applicant states that Rao does not detect a pattern in accordance with a preset threshold or varying the threshold in accordance with the received signals. The applicant also states that the detection in Rao is based upon status condition and whether the comparison in varying registers meets certain logic.
- b) Applicant traverses the examiner's OFFICIAL NOTICE.

Examiner's Response

- a) The examiner disagrees. Given the broadest interpretation of the claimed invention, the logic which varies based upon the received signal which is also associated with the detection of certain patterns is the preset threshold. Although Rao discloses the term "logic" and the pending claims recite "preset threshold" regardless of the terminology used, the terms are used to describe the same function/processing. Rao discloses (Table 1/Appendix) that based upon the type of signal received and the desired output/display mode determines the necessary conversion.
- b) The examiner incorporates previously relied upon US 6,366,699 (Kuwano) which was used in rejecting claims 33-38 which are now canceled. Kuwano discloses a system which detects telop

characters in a series of frames of video data by using a telop detection unit 2 (Fig 1, Fig 2). The telop detection unit judges whether each input frame includes a telop character display frame according to edge pairs detected from each input frame, using the intensity gradient directional information. Thus Kuwano meets the claimed language of examining a plurality of rows... by detected the video information in a frame, and meets the determining the number of high low transitions by detecting the intensity of adjacent edge pixels.

Regarding the "OFFICIAL NOTICE" pertaining to motion compensation. The examiner has incorporated two separate references, one US 20020054236 Wredenhagen et al., which discloses the claimed generation of motion signals.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2a. Claims 1, 4, 6, 8, 12-13, 18-19, 21,23 and 27-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Rao et al, US 5,828,786.

In considering claims 1, 4, 6, 8, 12-13, 18-19, 21, 23, 27-28,

a) the claimed a signal generator... is met by input processor 102 (Fig 3) which generates signals from the received camera 101.

b) the claimed a plurality of pattern detection state machines... is met by video stream analyzer 300 (Fig 3) which includes controller 402 (Fig 4a) which includes a plurality of state machines (Fig 5a/b) which detects the input signal (Appendix) and varies the output according to the

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display mode, where a variety of conversions between inputs/outputs can be provided (Appendix). The claimed preset threshold is met by the type of input and the desired output.

c) the claimed an arbiter state machine coupled... is met by video stream analyzer 300 which includes a statistical analyzer 401, reordering memory 403 both coupled to controller 402 (Fig 4A).

Regarding the detection of motion, Rao discloses that video stream analyzer detects the amount of motion in the received signal in order to determine whether field or frame filtering should be performed (col 13, line 4-21).

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2b. Claims 33-38 are rejected under 35 U.S.C. 102(e) as being anticipated by Kuwano et al., US 6,366,699.

In considering claims 33-38,

Kuwano discloses a system which detects telop characters in a series of frames of video data by using a telop detection unit 2 (Fig 1, Fig 2). The telop detection unit Judges whether each input frame includes a telop character display frame according to edge pairs detected from each input frame, using the intensity gradient directional information. Thus Kuwano meets the claimed language of examining a plurality of rows...by detected the video information in a frame, and meets the determining the number of high low transitions by detecting the intensity of adjacent edge pixels.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3a. Claims 2-3, 5 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rao et al., US 5,828,786.

Considering claim 2,

Rao discloses the elimination duplicate fields in order to improve video signal for compression.

However, a deinterlacing algorithm which ignores redundant fields and deinterlaces by meshing is conventional in the art, as disclosed by applicant's admitted prior art AAPA (page 8, para 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention Rao which discloses the removal of redundant fields in order to improve compression, with AAPA by using a conventional technique which ignores the redundant fields in order to deinterlace the signal by meshing, which can be provide the user a suitable uncompressed deinterlaced signal.

Considering claim 3,

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As disclosed above, based upon video stream analyzer 300 and what type of signals are detected and the desired output determines the deinterlacing algorithm.

Considering claims 5 and 20,

Rao does not explicitly recite the detection of a 2:2 pulldown pattern. However, Rao does disclose the use of 3:2 pulldown with the conventional NTSC signal.

The use of a 2:2 pulldown is performed when using the PAL signal, as disclosed by AAPA.

Thus, based upon the type of signal received (i.e. geographic location US is NTSC, overseas PAL), would determine whether to perform a 3:2 or 2:2 pulldown.

3b. Claims 9-11, 14-17, 24-26 and 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rao et al., US 5,828,786.

In considering claims 9-11 and 24-26,

Rao discloses the performance of motion compensation and also discloses that conventional motion compensation prediction is performed in the encoding process.

However, Rao does not explicitly recite how the motion is computed and the compensation performed based on the computed motion.

Conventional motion compensation is performed in an image in order to ascertain the differences (if any) between frames/fields of an image and whether there is motion in an image or artifacts which appears as differences between the detected frames/fields.

Thus the examiner takes "OFFICIAL NOTICE" regarding a system which performs motion compensation by calculating differences between pixels in a field, quantizing the differences and determining whether the differences exceed a threshold.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Rao which discloses image conversion from a received input format into a desired output performed, where Rao performs motion compensation and also eliminates any redundant fields to aid in the compression process, by also performing conventional motion compensation in order to even further reduce the size of the signal by eliminating those blocks/pixels in a field/frame which stay the same (no motion).

In considering claims 14-17, and 29-32,

Rao discloses a system which aids the encoder in the compression process by removing redundant/repeated fields, detecting scene cuts and mixed field frames.

However, Rao does not explicitly recite the detection of subtitles.

It is also conventional in the art to detect logos/text/subtitles in an image, since the addition of such items typically occur after the video frame has been created. This additional information would then produce unwanted effects, if not detected or removed from the video signal, since the detection between field/frames are based upon the video not the added items.

Thus the examiner takes "OFFICIAL NOTICE" to a system which detects logos/text or subtitles in an image.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Rao, which discloses a system which receives a variety of input signals and provides a variety output signals, and also detects within the received signal repeated fields,

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scene cuts and mixed field frames in order to provide an ideally compressed signal, by also detected the additional information included in a signal, since the additional information is typically not part of the original signal and thus would preferably be detected/removed.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Yenke whose telephone number is (571) 272-7359. The examiner work schedule is Monday-Thursday, 0730-1830 hrs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, John W. Miller, can be reached at (571)272-7352.

Any response to this action should be mailed to:

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

or faxed to:

(571)273-8300

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703)305-HELP.

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For other technical patent information needs, the Patent Assistance Center can be reached through customer service representatives at the above numbers, Monday through Friday (except federal holidays) from 8:30 a.m. to 5:00 p.m. EST/EDT.

The Patent Electronic Business Center (EBC) allows USPTO customers to retrieve data, check the status of pending actions, and submit information and

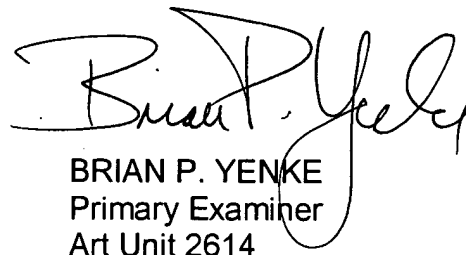
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applications. The tools currently available in the Patent EBC are Patent Application Information Retrieval (PAIR) and the Electronic Filing System (EFS).

PAIR (<http://pair.uspto.gov>) provides customers direct secure access to their own patent application status information, as well as to general patent information publicly available. EFS allows customers to electronically file patent application documents securely via the Internet. EFS is a system for submitting new utility patent applications and pre-grant publication submissions in electronic publication-ready form. EFS includes software to help customers prepare submissions in extensible Markup Language (XML) format and to assemble the various parts of the application as an electronic submission package. EFS also allows the submission of Computer Readable Format (CRF) sequence listings for pending biotechnology patent applications, which were filed in paper form.



B.P.Y
26 July 2005



BRIAN P. YENKE
Primary Examiner
Art Unit 2614